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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/282,101	03/30/1999	KEVAN LEE MILLER	YO998-527	8176

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EXAMINER	
HARPER, KEVIN C	

ART UNIT	PAPER NUMBER
2666	7

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/282,101	MILLER ET AL.	
	Examiner	Art Unit	
	Kevin C. Harper	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2,3,20,21 and 37* is/are allowed.

6)☒ Claim(s) *1,6,7,19,24,25 and 38-41* is/are rejected.

7)☒ Claim(s) *4,5,8-18,22,23 and 26-36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Response to Arguments

Applicant's arguments filed October 14, 2003 have been fully considered but they are not persuasive. Applicant challenged examiner's taking of Official Notice for storing packets during a reconfiguration. Drottar et al. (US 6,333,929) discloses packets buffered during a network reconfiguration (col. 8, line 66 through col. 7, line 7).

Drawings

The drawings were received on October 14, 2003. These drawings are approved.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 19 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamport et al. (US 5,138,615).

1. Regarding claim 1, Lamport discloses a method for reconfiguring a routing network (abstract, last four lines). The method comprises quiescing the routing network (Figure 20; col. 34, lines 6-17; col. 39, lines 20-28) and reconfiguring the quiesced routing network (col. 42, lines 31-36; col. 46, lines 49-54; col. 47, lines 6-14; col. 48, lines 28-32). The network comprises switches (Figure 3) each having FIFO queues (Figures 10-11). However, Lamport does not disclose that the quiescing preserves a first-in first-out ordering of data messages within the routing network. Examiner takes Official Notice that a switch in a communication system preferably queues data packets or maintains queued data packets when the switch is temporarily unable to transmit the packets. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to preserve the data packets within the FIFO queues during quiescing and reconfiguration of the routing network in the invention of Lamport in order to prevent data packets from being retransmitting by the host devices (Figures 2-3) due to and at each occurrence of a network reconfiguration.

2. Regarding claim 19, Lamport discloses a system for reconfiguring a routing network (abstract, last four lines). The system comprises a means (Figure 3, items 124, 126, 140 and 142) for quiescing the routing network (Figure 20; col. 34, lines 6-17; col. 39, lines 20-28) and for reconfiguring the quiesced routing network (col. 42, lines 31-36; col. 46, lines 49-54; col. 47, lines 6-14; col. 48, lines 28-32). The network comprises switches (Figure 3) each having FIFO queues (Figures 10-11). However, Lamport does not disclose that the quiescing preserves a first-in first-out ordering of data messages within the routing network. Examiner takes Official

Notice that a switch in a communication system preferably queues data packets or maintains queued data packets when the switch is temporarily unable to transmit the packets. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to preserve the data packets within the FIFO queues during quiescing and reconfiguration of the routing network in the invention of Lamport in order to prevent data packets from being retransmitting by the host devices (Figures 2-3) due to and at each occurrence of a network reconfiguration (note: as interpreted under 35 USC 112, 6th paragraph, the switches performing a distributed network reconfiguration as disclosed in Lamport are structurally equivalent to the computing units of the instant application as noted on page 9, all lines and page 23, line 17 through page 24, line 8 of the specification; claims 1-18 are not considered for interpretation under 35 USC 112, 6th paragraph because these claims do not include the words "steps for" as required by MPEP 2181).

3. Regarding claim 38, Lamport discloses an inherent computer usable medium having a computer readable program code means (Figure 19, item 900) for effecting reconfiguring a routing network (abstract, last four lines). The program code means comprises a means for (Figure 3, items 124, 126, 140 and 142) for quiescing the routing network (Figure 20; col. 34, lines 6-17; col. 39, lines 20-28) and for reconfiguring the quiesced routing network (col. 42, lines 31-36; col. 46, lines 49-54; col. 47, lines 6-14; col. 48, lines 28-32). The network comprises switches (Figure 3) each having FIFO queues (Figures 10-11). However, Lamport does not disclose that the quiescing preserves a first-in first-out ordering of data messages within the routing network. Examiner takes Official Notice that a switch in a communication system preferably queues data packets or maintains queued data packets when the switch is temporarily

unable to transmit the packets. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to preserve the data packets within the FIFO queues during quiescing and reconfiguration of the routing network in the invention of Lamport in order to prevent data packets from being retransmitting by the host devices (Figures 2-3) due to and at each occurrence of a network reconfiguration (note: as interpreted under 35 USC 112, 6th paragraph, the program 900 of Figure 19 of Lamport is equivalent to the computer readable program means).

Claims 1, 6-7, 19, 24-25 and 38-41 are rejected under 35 U.S.C. 103(a) as being obvious over Banavar et al. (US 6,336,119) in view of Lamport et al. (US 5,138,615).

The applied reference of Banavar has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the

same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2)..

4. Regarding claims 1 and 6, Banavar discloses a publish/subscribe system having several switching nodes (Figure 1). However, Banavar does not disclose quiescing the publish/subscribe system nor reconfiguring the quiesced publish/subscribe system. Lamport discloses a method for reconfiguring a routing network (abstract, last four lines). The method comprises quiescing the routing network (Figure 20; col. 34, lines 6-17; col. 39, lines 20-28) and reconfiguring the quiesced routing network (col. 42, lines 31-36; col. 46, lines 49-54; col. 47, lines 6-14; col. 48, lines 28-32). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to quiesce a publish/subscribe system and reconfigure the quiesced publish/subscribe system in the invention of Banavar in order for the nodes of the publish/subscribe system to accommodate network topology changes. Further, Banavar does not disclose FIFO queuing. Lamport discloses network switches (Figure 3) each having FIFO queues (Figures 10-11). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have FIFO queuing in the invention of Banavar to attempt to properly route and deliver real-time data or data having a sequencing requirement. Still further, Banavar in view of Lamport does not disclose that the quiescing preserves a first-in first-out ordering of data messages within the routing network. Examiner takes Official Notice that a switch in a communication system preferably queues data packets or maintains queued data packets when the switch is temporarily unable to transmit the packets. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to preserve the data packets within the FIFO queues during quiescing and reconfiguration of the routing network in

the invention of Banavar in view of Lamport in order to prevent data packets from being retransmitting by the host devices (Lamport, Figures 2-3) due to and at each occurrence of a network reconfiguration. Still further, Banavar in view of Lamport does not disclose that the reconfiguration is transparent to the publishers and subscribers. Examiner takes Official Notice that host devices are preferably unaware of network control operations in order to simplify network control communications or to simplify the design host devices. Therefore, it would have been obvious to one skilled in the art at the time the invention was made for the publishers and subscribers to be unaware of a network reconfiguration in the invention of Banavar in view of Lamport.

5. Regarding claims 19 and 24, Banavar discloses a publish/subscribe system having several switching nodes (Figure 1). However, Banavar does not disclose a means for quiescing the publish/subscribe system nor a means for reconfiguring the quiesced publish/subscribe system. Lamport discloses a system for reconfiguring a routing network (abstract, last four lines). The system comprises a means (Figure 3, items 124, 126, 140 and 142) for quiescing the routing network (Figure 20; col. 34, lines 6-17; col. 39, lines 20-28) and for reconfiguring the quiesced routing network (col. 42, lines 31-36; col. 46, lines 49-54; col. 47, lines 6-14; col. 48, lines 28-32). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to quiesce a publish/subscribe system and reconfigure the quiesced publish/subscribe system in the invention of Banavar in order for the nodes of the publish/subscribe system to accommodate network topology changes. Further, Banavar does not disclose FIFO queuing. Lamport discloses network switches (Figure 3) each having FIFO queues (Figures 10-11). Therefore, it would have been obvious to one skilled in the art at the time the invention was

made to have FIFO queuing in the invention of Banavar to attempt to properly route and deliver real-time data or data having a sequencing requirement. Still further, Banavar in view of Lamport does not disclose that the quiescing preserves a first-in first-out ordering of data messages within the routing network. Examiner takes Official Notice that a switch in a communication system preferably queues data packets or maintains queued data packets when the switch is temporarily unable to transmit the packets. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to preserve the data packets within the FIFO queues during quiescing and reconfiguration of the routing network in the invention of Banavar in view of Lamport in order to prevent data packets from being retransmitting by the host devices (Lamport, Figures 2-3) due to and at each occurrence of a network reconfiguration. Still further, Banavar in view of Lamport does not disclose that the reconfiguration is transparent to the publishers and subscribers. Examiner takes Official Notice that host devices are preferably unaware of network control operations in order to simplify network control communications or to simplify the design host devices. Therefore, it would have been obvious to one skilled in the art at the time the invention was made for the publishers and subscribers to be unaware of a network reconfiguration in the invention of Banavar in view of Lamport. (note: as interpreted under 35 USC 112, 6th paragraph, the switches performing a distributed network reconfiguration as disclosed in Lamport are structurally equivalent to the computing units of the instant application as noted on page 9, all lines and page 23, line 17 through page 24, line 8 of the specification).

6. Regarding claims 7 and 25, the network of Banavar is a broker network (Figures 1-3A). However, Banavar in view of Lamport does not disclose that the broker network is continuously available. Examiner takes Official Notice that the function of a network (i.e. providing a

connectivity or content) is preferably available for a continuous period of time in order to allow for clients to access the network at any convenient time. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a continuously available network in the invention of Banavar in view of Lamport.

7. Regarding claims 38 and 39, Banavar discloses a publish/subscribe system having several switching nodes (Figure 1). However, Banavar does not disclose a computer readable means for quiescing the publish/subscribe system nor a computer readable means for reconfiguring the quiesced publish/subscribe system. Lamport discloses a system for reconfiguring a routing network (abstract, last four lines). The system comprises a computer readable program code means (Figure 3, items 124, 126, 140 and 142) for quiescing the routing network (Figure 20; col. 34, lines 6-17; col. 39, lines 20-28) and for reconfiguring the quiesced routing network (col. 42, lines 31-36; col. 46, lines 49-54; col. 47, lines 6-14; col. 48, lines 28-32). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to quiesce a publish/subscribe system and reconfigure the quiesced publish/subscribe system in the invention of Banavar in order for the nodes of the publish/subscribe system to accommodate network topology changes. Further, Banavar does not disclose FIFO queuing. Lamport discloses network switches (Figure 3) each having FIFO queues (Figures 10-11). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have FIFO queuing in the invention of Banavar to attempt to properly route and deliver real-time data or data having a sequencing requirement. Still further, Banavar in view of Lamport does not disclose that the quiescing preserves a first-in first-out ordering of data messages within the routing network. Examiner takes Official Notice that a switch in a communication system preferably queues data

packets or maintains queued data packets when the switch is temporarily unable to transmit the packets. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to preserve the data packets within the FIFO queues during quiescing and reconfiguration of the routing network in the invention of Banavar in view of Lamport in order to prevent data packets from being retransmitting by the host devices (Lamport, Figures 2-3) due to and at each occurrence of a network reconfiguration.

8. Regarding claim 40, Banavar in view of Lamport does not disclose that the publish/subscribe system comprises a sequencing node. Examiner takes Official Notice that a network preferably has a sequencing node in order to resequence any sequenced or real-time data that has become out-of-sequence after passing through the network. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a sequencer node in the invention of Banavar in view of Lamport.

9. Regarding claim 41, Banavar in view of Lamport does not disclose that the reconfiguration is transparent to the publishers and subscribers. Examiner takes Official Notice that host devices are preferably unaware of network control operations in order to simplify network control communications or to simplify the design host devices. Therefore, it would have been obvious to one skilled in the art at the time the invention was made for the publishers and subscribers to be unaware of a network reconfiguration in the invention of Banavar in view of Lamport.

Allowable Subject Matter

10. Claim 2-3, 20-21 and 37 are allowed.

11. Claims 4-5, 8-18, 22-23 and 26-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 703-305-0139. The examiner can normally be reached weekdays, except Wednesday, from 9:30 AM to 8:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 703-308-5463. The fax number for Technology Center (TC) 2600 is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office for TC 2600 at 703-306-0377.

Kevin C. Harper

January 12, 2004

DANG TON
PRIMARY EXAMINER